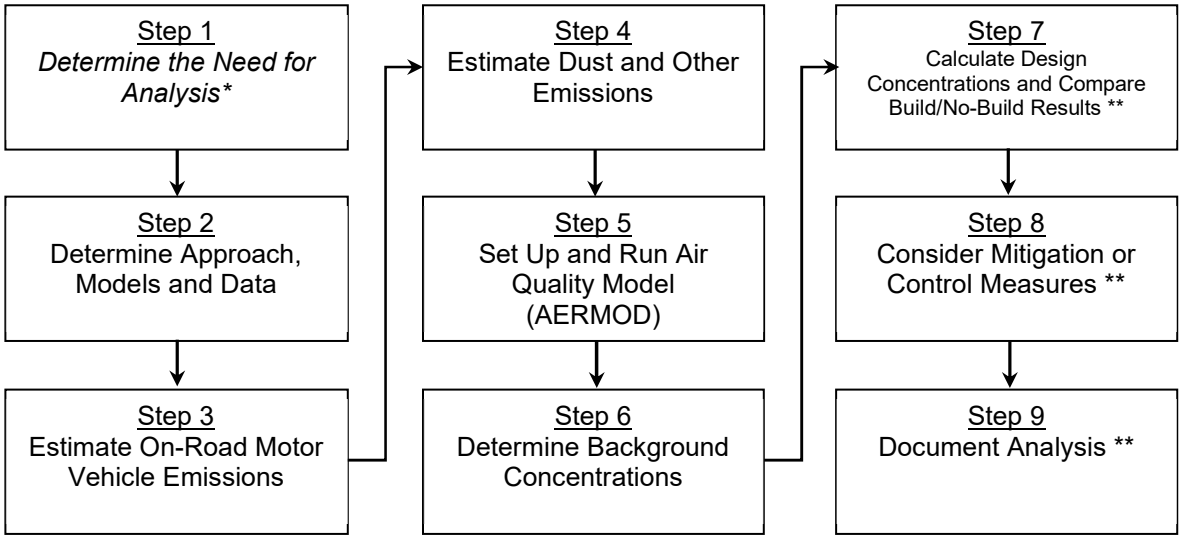
Project Level PM Quantitative Hot-Spot Analysis – Consultation Document for Project of Air Quality Concern

Completing a Particulate Matter (PM) Hot-Spot Analysis

The general steps required to complete a quantitative PM hot-spot analysis are outlined below and described in detail in the EPA Office of Transportation and Air Quality guidance document "Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas" EPA-420-B-15-084, November 2015.



* Described in Attachment A (Air Quality Concern Questionnaire).
** These Steps will be described and documented in a final air quality analysis report.

Step 2: Determine the Approach, Models, and Data

a. Describe the project area (area substantially affected by the project, 58 FR 62212) and emission sources.
b. Determine general approach and analysis year(s) – year(s) of peak emissions during the time frame of the transportation plan (69 FR 40056).
c. Determine National Ambient Air Quality Standards (NAAQS) and PM types to be evaluated.
d. Select emissions and dispersion models and methods to be used.
e. Obtain project-specific data (e.g., fleet mix, peak-hour volumes and average speed).

Step 3: Estimate On-Road Motor Vehicle Emissions

a. Estimate on-road motor vehicle emissions using MOVES.

Step 4: Estimate Dust and Other Emissions

a. Estimate road dust emissions using AP-42 Paved Roads.
b. Do emissions from other sources (e.g., locomotives) need to be considered?

Step 5: Set Up and Run Air Quality Model (AERMOD)

a. Obtain and input required site data (e.g., meteorological).
b. Input MOVES and AP-42 outputs (emission factors).
c. Determine number and location of receptors, roadway links, and signal timing.
d. Run air quality dispersion model and obtain concentration results.

Step 6: Determine Background Concentrations

a. Determine background concentrations from nearby and other emission sources excluding the emissions from the project itself.

Step 7: Calculate Design Concentrations and Compare Build/No-Build Results

a. Add step 5 results to background concentrations to obtain values for the Build scenario.
b. Determine if the design values allow the project to conform.

Step 8: Consider Mitigation or Control Measures

a. Consider measures to reduce emissions and redo the analysis. If mitigation measures are required for project conformity, they must be included in the applicable SIP and be enforceable.
b. Determine if the design values from allow the project to conform after implementing mitigation or control measures.

Step 9: Document Analysis

a. Determine if the project conforms or not based on the results of step 7 or step 8.
To support the conclusion that a project meets conformity under 40 CFR 93.116 and 93.123, at a minimum the documentation will include:

- *Description of proposed project, when it is expected to open, and projected travel activity data.*
- *Analysis year(s) examined and factors considering in determining year(s) of peak emissions.*
- *Emissions modeling data, model used with inputs and results, and how characterization of project links.*
- *Model inputs and results for road dust, construction emissions, and emissions from other source if needed.*
- *Air Quality modeling data, included model used, inputs and results and receptors.*
- *How background concentrations were determined.*
- *Any mitigation and control measures implemented, including public involvement or consultation if needed.*
- *How interagency and public participation requirements were met.*
- *Conclusion that the proposed project meets conformity requirements.*
- *Sources of data for modeling.*

Interagency Consultation

ADOT will circulate the following Tables along with the *Project Level Conformity – Particulate Matter Project of Air Quality Concern Questionnaire* to describe in detail how the steps listed in EPA hot spot guidance will be followed. It is requested that consulted parties provide comments or questions on the methods, models and assumptions within 30 business days, a non-response will be interpreted to mean that the party concurs with the planning assumptions as describe in the Table. Table 1 includes ADOT's recommended methods, models, and assumptions, while Table 2 displays proposed inputs, parameters, and data sources for the project.

Table 1. Methods, Models and Assumptions

Estimate On-Road Motor Vehicle Emissions (Step 3) – Modeling highways and/or intersections for PM10 (Contact ADOT if modeling off-network data such as terminals and parking lots or performing a PM2.5 analysis)		
MOVES3.1	**Description**	**Reference**
Scale	*Onroad, Project Scale and Inventory*	EPA Hot Spot Guidance Section 4.4.2
Time Spans	*4-weekday runs for each of the following months January (Quarter 1), April (Quarter 2), July (Quarter 3); October (Quarter 4) for each year. Each of these 4 runs will further be split by Morning peak hours, Midday Emissions, Evening Peak and Overnight hours as defined by TDM model.*	EPA Hot Spot Guidance Sections 2.8, 4.3 & 4.4.3
Geographic Bounds	*County (If a project spans multiple counties, see the EPA Guidance)*	EPA Hot Spot Guidance Section 4.4.4
Onroad Vehicles	*All Fuels and Source Use Types will be selected.*	EPA Hot Spot Guidance Section 4.4.5
Road Type	*Based on the project location*	EPA Hot Spot Guidance Section 4.4.6
Pollutants and Processes	*Primary Exhaust PM10-Total(for Running Exhaust and Crankcase Running Exhaust), Break Wear Particulate, Tire Wear Particulate*	EPA Hot Spot Guidance Sections 2.5 & 4.4.7
General Output and Output Emissions Detail	*Database will be created, Grams, Joules, Miles, Distance Traveled, Population will be selected. Output Aggregation is set to Hour and Link by default and the "for All Vehicle/Equipment Categories" and "Onroad" selections are optional in the Output Emissions Detail. After running MOVES3.1 for a particular hour/day/month scenario, the PM10_Grams_Per_Veh_Hour script (for Inventory mode) can be run on the output database.*	EPA Hot Spot Guidance Section 4.4.8, 4.4.9 & 4.6
Create Input Database	*Input database will be created and modified for Project level using required Regional Inputs from latest Regional Conformity Analysis.*	EPA Hot Spot Guidance Section 4.4.10 and See Project Data Manager below
Project Data Manager	*Database will be created and MOVES3.1 templates will be created to include local project data and information provided by xx, e.g., Fuel, Age Distribution, Meteorology Data, to be consistent with the regional model. Links and Link Source Type will be specific to project as provided by the traffic study, any missing information will use default MOVES3.1 data.*	EPA Hot Spot Guidance Sections 4.5 &Appendix D
Meteorology	*Same for build and no-build scenarios. A minimum of four hours (AM, PM, MD & ON), for one day (weekday) and for January, April, July and October is required. May use the County meteorology file for the county*	EPA Hot Spot Guidance Section 4.5.1

	used in the latest SIP or regional conformity analysis.	
Age Distribution	*Same for build and no-build scenarios, unless something about the project would change them.*	EPA Hot Spot Guidance Section 4.5.2
Fuel	*Same for build and no-build scenarios. Fuel files should be consistent with those used in the latest SIP or regional conformity analysis if local information is available. Otherwise, MOVES default fuel supply and formulation information can be used.*	EPA Hot Spot Guidance Section 4.5.3, PM hot-spot training slides Module 2
I/M Programs	*No impact on PM emissions.*	EPA Hot Spot Guidance Section 4.5.4
Retrofit Data	*If necessary. For example, a bus terminal project might include plans to mitigate emissions by retrofitting the bus fleet.*	Project specific modeling EPA Hot Spot Guidance Section 4.5.5
Links	*Unique inputs needed for each run. Requires information on each link's length (in miles), traffic volume (vehicle per hour), average speed (miles per hour) and road grade (percent).*	EPA Hot Spot Guidance Section 4.5.6 & Appendix D
Link Source Types	*Unique inputs needed for each run. Project-specific data are preferred. If the source type distribution can be represented by that of the regional fleet, the data used in the latest regional emissions analysis can be provided.*	EPA Hot Spot Guidance Section 4.5.7
Link Drive Schedules, Operating Mode Distribution	*Unique inputs needed for each run. Three options are available: 1. Provide average speed and road type through the Links Importer; 2. Provide a link drive schedule using the Link Drive Schedule Importer; 3. Provide a detailed operation distribution for the link.*	EPA Hot Spot Guidance Section 4.5.8
Off-Network, Hotelling, Generic	*If necessary. For example, a project analysis includes areas where vehicles are not driving on the project links, but still contributing to the project's emissions.*	EPA Hot Spot Guidance Section 4.5.9
Estimate Dust and Other Emissions (Step 4) (AP-42 emission factors below should be based on SIP or Regional Conformity Analysis provided by ADEQ, MAG, PAG or YMPO depending on the project's location)		
AP-42, Fifth Edition, 2011	**Description**	**Reference**
Average Weight Vehicles	*All roads xx Ton, Freeway xx Ton, Arterials xx Ton*	Source of Data TIP or RTP, Regional Conformity Analysis
Silt Loading	*Section 13.2.1 Paved Roads from AP 42 will be used, consistent with the Regional analysis from xx. Emission factors for road and construction dust should be added to the emission factors generated for each link by MOVES3.1. Ex. Silt loading – Freeways .02 g/m^2, Arterials >10,000 ADT .067g/m^2, Low traffic roads <10,000 ADT .23g/m^2.*	EPA Hot Spot Guidance Section 6, When estimating emissions of re-entrained road dust from paved roads, site-specific silt loading data must be consistent with the data used for the project's county in the regional emissions analysis (40 CFR 93.123(c)(3)).

Construction Dust	*If Construction Dust is temporary, it will not be included. If there are other sources (e.g., locomotives), they need to be considered.*	EPA Hot Spot Guidance Section 6.5
Precipitation	*In xxx SIP/Regional Conformity used average of xx days with at least .01 inch of precipitation County*	Source of Data TIP or RTP, Regional Conformity Analysis, SIP
Set Up and Run Air Quality Model (AERMOD) (Step 5)		
AERMOD v.23132	**Description**	**Reference**
Model Setup (CO Pathway)	*Control Pathway defines the primary model settings.*	EPA Hot Spot Guidance Section 7.1, 7.2 & Appendix J, AERMOD User's Guide Section 2.3.2 & 3.2
TITLEONE	*Model title*	
MODELOPT	*CONC FLAT (Use IAC if modeling nearby elevated source)*	Modeling Concentrations and Flat Terrain
AVERTIME	*24*	Average across each 24-hour period from the available met data
URBANOPT	*Population for Urban Area*	
FLAGPOLE	*1.8*	
POLLUTID	*PM10*	
Source Types and Characters (SO Pathway)	*For highway and interaction sources, characterize area sources with the LINE source keyword (Use IAC if volume sources are needed).*	EPA Hot Spot Guidance Section 7.3, 7.4 & Appendix J.2, J.3, AERMOD User's Guide Section 2.3.3 & 3.3
LOCATION	*Srcid Srctyp (LINE)*	
SRCPARAM	*Srcid Lnemis Relhgt Width Szinit*	LINE Source parameters See EPA Hot Spot Guidance Appendix J.3.1
URBANSRC	*Srcid*	Urban source IDs
EMISFACT	*Emission rate=1, Use SEASHR*	Total 16 MOVES run=4 seasons x 4 time periods to 96 factors (4 seasons/24 hours) See PM hot-spot training slides (FHWA, 2022)
SRCGROUP	*GroupID or All*	
Meteorological Data (ME Pathway)	*The meteorological data will be based on the pre-processed met files from ADEQ or the met files produced by AERMET program.*	EPA Hot Spot Guidance Section 7.5, Appendix J.4, AERMOD User's Guide Section 2.3.5 & 3.5
SURFFILE	*Surface file name*	*.sfc
PROFFILE	*Profile (upper air) file name*	*.pfl
SURFDATA	*Surface data station*	
UAIRDATA	*Upper air data station*	
PROFBASE	*Met data station elevation*	
Run Met Pre-Processor	*If necessary*	AERMET User's Guide (for AERMOD)
Urban or Rural Sources	*Specifications for URBANOPT (CO Pathway) and URBANSRC (SO Pathway)*	EPA Hot Spot Guidance Section 7.5.5 & Appendix J.4, AERMOD Implementation Guide,

		Section 7.2.3 of Appendix W to 40 CFR Part 51
Receptors (RE Pathway)	*Receptors should begin 5 m from roadway edge, extending up to 105 m (or further if needed). Spacing of 25 m is typically sufficient.*	EPA Hot Spot Guidance Section 7.6, AERMOD User's Guide Section 2.3.4 & 3.4, Section 7.2.2 of Appendix W to 40 CFR Part 51, See PM hot-spot training slides
DISCCART	*X Y (Z)*	Z is optional if FLAGPOLE is already defined in CO Pathway.
GRIDCART	*Use a 3rd party program if available.*	e.g., AERMOD View
Output (OU Pathway)	*PLOTFILE and/or POSTFILE will be generated if necessary.*	EPA Hot Spot Guidance Appendix J.6, AERMOD User's Guide Section 2.3.6 & 3.7
RECTABLE	*24 6th*	Since PM should be one or less exceedance per year, with 5 years of met data, the 6th highest concentration at each receptor
PLOTFILE	*Optional*	
POSTFILE	*Optional*	
Model Runs	*Use AERMOD User's Guide Appendix B to decode and correct errors.*	EPA Hot Spot Guidance Section 7.7, AERMOD User's Guide Section 2.3.7, 2.3.8, 3.8 & Appendix B
Determine Background Concentrations (Step 6)		
Source Type	**Description**	**Reference**
Nearby Sources	*If necessary*	EPA Hot Spot Guidance Section 8.2
Other Sources (Ambient Monitoring Data)	*Using a Single Monitor (Most likely option) or Interpolating Between Several Monitors. When using a single monitor: Select a monitor with similar land use to the project, upwind from project, and isn't impacted by Exceptional Events. Three years of monitoring data (20xx-20xx) using the 4th highest readings based on total number of sampling days of 1076 days, the 4th highest monitor value over these three years is xxx. To estimate the sixth-highest concentration, for each receptor, the six highest 24-hour concentrations from each quarter and year of meteorological data will be arrayed together and ranked, then added to the xxx monitor value.*	EPA Hot Spot Guidance Section 8.3, PM hot-spot training slides Module 5 & 6

Table 2. Proposed Inputs, Parameters and Data Sources

Estimate On-Road Motor Vehicle Emissions (Step 3)		
MOVES3.1	**Input**	**Data Source/Detail**
Scale	Onroad, Project Scale and Inventory	Paul Spur/Douglas Regional Conformity Data (April 2024)
Time Spans	July 2050, 4 runs	2050 represents the year with the highest vehicle volume along the Connector Road due to the proposed POE and potential development in the area. Therefore, 2050 will also contain the highest levels of road dust, which is the largest contributor to PM10 emissions. Because there is no seasonality associated with the traffic data developed in the Traffic Study, preliminary runs were conducted for each season (Jan, Apr, July & Oct) with July having the highest emissions. 4 weekday time periods (6-9AM, 9AM-4PM, 4-7PM & 7PM-6AM) will be analyzed for July 2050.
Geographic Bounds	Cochise County, Arizona	EPA Hot Spot Guidance Section 4.4.4
Onroad Vehicles	All Fuels and Source Use Types will be selected.	EPA Hot Spot Guidance Section 4.4.5
Road Type	Rural Unrestricted Access	EPA Hot Spot Guidance Section 4.4.6
Pollutants and Processes	Primary Exhaust PM10-Total (for Running Exhaust and Crankcase Running Exhaust), Break Wear Particulate, Tire Wear Particulate	EPA Hot Spot Guidance Sections 2.5 & 4.4.7
General Output and Output Emissions Detail	Database will be created, Grams, Joules, Miles, Distance Traveled, Population will be selected. Output Aggregation is set to Hour and Link by default and Source Use Type is selected in the "Onroad" selection. All other items in the "for All Vehicle/Equipment Categories" and "Onroad" selections are left unchecked in the Output Emissions Detail. After running MOVES3.1 for a particular hour/day/month scenario, the PM10_Grams_Per_Veh_Hour script can be run on the output database.	EPA Hot Spot Guidance Section 4.4.8, 4.4.9 & 4.6
Create Input Database	Input database will be created and modified for Project level using required Regional Inputs from latest Regional Conformity Analysis.	EPA Hot Spot Guidance Section 4.4.10 and See Project Data Manager below
Project Data Manager	Database will be created and MOVES3.1 templates will be created to include local	EPA Hot Spot Guidance Sections 4.5 &Appendix D

	project data and information, e.g., Fuel, Age Distribution, Meteorology Data, to be consistent with the Regional Conformity Analysis. Links and Link Source Type will be specific to project as provided by the traffic study, any missing information will use default MOVES3.1 data.	
Meteorology	2019 Data from Douglas-Bisbee Airport	NOAA, Paul Spur/Douglas Regional Conformity Data (April 2024) EPA Hot Spot Guidance Section 4.5.1
Age Distribution	2020 Data from ADOT MVD Reports for Cochise County Projected to Year 2050 from EPA's Age Distribution Projection Tool.	ADOT, Paul Spur/Douglas Regional Conformity Data (April 2024) EPA Hot Spot Guidance Section 4.5.2
Fuel	Default fuel information provided by MOVES3.1 will be used for all fuel inputs.	MOVES Default Data EPA Hot Spot Guidance Section 4.5.3, PM hot-spot training slides Module 2
I/M Programs	No I/M Program active for the project area.	ADOT EPA Hot Spot Guidance Section 4.5.4
Retrofit Data	Not applicable for this project.	Project specific modeling EPA Hot Spot Guidance Section 4.5.5
Links	Unique inputs to be used for each run based on each link's length (miles), volume (vehicles/hour) average speed (miles/hour), and road grade (%). The proposed links are shown in Attachment B.	EPA Hot Spot Guidance Section 4.5.6 & Appendix D
Link Source Types	Unique inputs to be used for each run, based on project specific data from the Traffic Study. The distribution of passenger, medium, and heavy vehicles was available from the Study. The vehicles in these three source types were allocated to the associated MOVES source types using the SourceTypePopulation breakdown from the Regional Conformity Analysis.	EPA Hot Spot Guidance Section 4.5.7 City of Douglas International Port of Entry Connector Road Traffic Study Section 3.4.4, Section 7.1, and Section 7.2. Paul Spur/Douglas Regional Conformity Data (April 2024)
Link Drive Schedules, Operating Mode Distribution	Average speed and road type will be provided through the Links Importer. Precise drive schedules and operating mode distributions are not available based on information developed in the Traffic Study.	EPA Hot Spot Guidance Section 4.5.8 City of Douglas International Port of Entry Connector Road Traffic Study analysis files

Off-Network, Hotelling	This project analysis focuses on the Connector Road and its intersection with SR 80. There are no sources of off-network or hotelling emissions that are affected by the project.	EPA Hot Spot Guidance Section 4.5.9
Estimate Dust and Other Emissions (Step 4)		
AP-42, Fifth Edition, 2011	**Parameter**	**Data Source/Detail**
Average Weight Vehicles	Average Weight of Vehicles to be determined using the average vehicle weights from MOVES used in the Regional Conformity Analysis	Paul Spur/Douglas Regional Conformity Data (April 2024)
Silt Loading	Silt loading values for each road will be consistent with the Regional Conformity Analysis based on daily traffic volume	Paul Spur/Douglas Regional Conformity Data (April 2024)
Construction Dust	Construction Dust is temporary and not included	EPA Hot Spot Guidance Section 6.5
Precipitation	Cochise County has an average of 60 days with at least 0.01 inch of precipitation	Figure 13.2.1-2 of Section 13.2.1 of AP-42
Set Up and Run Air Quality Model (AERMOD) (Step 5)		
AERMOD v.23132	**Parameter**	**Data Source/Detail**
Model Setup (CO Pathway)		EPA Hot Spot Guidance Section 7.1, 7.2 & Appendix J, AERMOD User's Guide Section 2.3.2 & 3.2
TITLEONE	Douglas Connector Road_PM10	
MODELOPT	Non-Default - CONC FLAT	Modeling Concentrations and Flat Terrain per EPA Hotspot Guidance Section J.5
AVERTIME	24-hour	Average across each 24-hour period from the available met data
URBANOPT	Population for Urban Area - 125,663	
FLAGPOLE	Flagpole receptor heights of 1.8 m will be used.	
POLLUTID	PM10	
Source Types and Characters (SO Pathway)	Line Source	EPA Hot Spot Guidance Section 7.3, 7.4 & Appendix J.2, J.3, AERMOD User's Guide Section 2.3.3 & 3.3
LOCATION	Srcid: LINE Srctyp ALINE	
SRCPARAM	Srcid: LINE Lnemis: TBD Relhgt: Szinit*0.5 Width: The width of the traveled way (all travel lanes) + 6 meters Szinit: optional	LINE Source parameters See EPA Hot Spot Guidance Appendix J.3.1
URBANSRC	Srcid	Urban source IDs
EMISFACT	Emission rate=TBD	Total 16 MOVES run=4 seasons x 4 time periods to 96 factors (4 seasons/24 hours)
SRCGROUP	GroupID or All	

Meteorological Data (ME Pathway)	The meteorological data for the Bisbee-Douglas International Airport will be based on the pre-processed met files from ADEQ or the met files produced by AERMET program	EPA Hot Spot Guidance Section 7.5, Appendix J.4, AERMOD User's Guide Section 2.3.5 & 3.5
SURFFILE	Douglas2015-2019	*.sfc
PROFFILE	Douglas2015-2019	*.pfl
SURFDATA	Surface data station: 93026 2015 Bisbee-Douglas	
UAIRDATA	Upper air station: 93026 2015 Bisbee-Douglas	
PROFBASE	Met data station elevation: 1,270 m	
Run Met Pre-Processor	N/A	
Urban or Rural Sources	Specifications for RURALOPT (CO Pathway) and RURALSRC (SO Pathway)	EPA Hot Spot Guidance Section 7.5.5 & Appendix J.4, AERMOD Implementation Guide, Section 7.2.3 of Appendix W to 40 CFR Part 51
Receptors (RE Pathway)	Receptors begin 5 m from roadway edge, extending up to 105 m with a spacing of 25 m. Please refer to AERMOD Receptor Grid Figure in Attachment B.	EPA Hot Spot Guidance Section 7.6, AERMOD User's Guide Section 2.3.4 & 3.4, Section 7.2.2 of Appendix W to 40 CFR Part 51, See PM hot-spot training slides
DISCCART	X Y	
GRIDCART	Using AERMOD View	
Output (OU Pathway)	PLOTFILE and/or POSTFILE will be generated if necessary.	EPA Hot Spot Guidance Appendix J.6, AERMOD User's Guide Section 2.3.6 & 3.7
RECTABLE	24 6th	Since PM should be one or less exceedance per year, with 5 years of met data, the 6th highest concentration at each receptor
PLOTFILE	Optional	
POSTFILE	Optional	
Model Runs		
Determine Background Concentrations (Step 6)		
Source Type	**Description**	**Data Source/Detail**
Nearby Sources	If necessary	EPA Hot Spot Guidance Section 8.2
Other Sources (Ambient Monitoring Data)	Background concentrations will be interpolated from 2 monitors: AQS Site ID 04-003-0011 – Paul Spur Chemical Lime Plant and AQS Site ID 04-003-1005 – Douglas Red Cross. Interpolation approach consistent with recent ADOT air quality analyses. Refer to Figure 5 of the PM Questionnaire (Attachment A of this document) for the locations of the monitoring sites.	

	As stated above, meteorological data will be taken from the Bisbee-Douglas International Airport, please refer to Attachment B for location and wind rose.	

References

PM Hot-spot guidance, EPA-420-B-21-037, October 2021.

User's Guide for the AMS/EPA Regulatory Model (AERMOD), EPA-454/B-21-001, April 2021.

AERMOD Implementation Guide, EPA-454/B-21-006, July 2021.

User's Guide for the AERMOD Meteorological Preprocessor (AERMET), EPA-454/B-22-006, June 2022.

Completing Quantitative PM Hot-spot Analyses: 3-Day Course, FHWA, October 2022.

Attachment A: Project Level PM Quantitative Hot-Spot Analysis – Project of Air Quality Concern Questionnaire

Project Level PM Quantitative Hot-Spot Analysis – Project of Air Quality Concern Questionnaire

To: Beverly Chenausky, Assistant Environmental Administrator
Arizona Department of Transportation (ADOT)

From: Allison Fluitt, P.E., AICP
Kimley-Horn and Associates, Inc.

Date: June 4, 2024

Subject: Douglas Commercial International Port of Entry Connector Road
Federal Project No.: 999-A(561)T
ADOT Project No.: 103686

The Arizona Department of Transportation (ADOT) developed the following questionnaire to aid in determining if a project that is administered using Federal Highway Administration (FHWA) and/or Federal Transit Administration (FTA) funding requires a quantitative PM hot-spot analysis. The responses to the questionnaire are intended to be used for interagency consultation purposes only.

Project Setting and Description

This PM Questionnaire was developed to support the Design Concept Report (DCR) for a connector road between the proposed Douglas Commercial International Port of Entry (IPOE) at the United States (U.S.)-Mexico border and Arizona State Route 80 (SR 80). The project is in the ADOT Southeast District in Cochise County west of Douglas, Arizona and is anticipated to open in 2028.

There are three alignment alternatives currently being considered for the proposed connector road west of United States Route 191 (US 191), two of which intersect SR 80 at James Ranch Road and one of which intersects SR 80 at Brooks Road. The project vicinity is shown in **Figure 1**, and the three alignment alternatives are shown in **Figure 2**. For the purposes of this report, the preferred alignment alternative for the connector road is assumed to intersect SR 80 at the existing SR 80 / James Ranch Road intersection. The results of the analysis at the SR 80 / James Ranch Road intersection are anticipated to be similar at the SR 80 / Brooks Road intersection if the preferred alignment alternative for the connector road intersects SR 80 at Brooks Road instead of James Ranch Road.

Figure 1. Project Vicinity Map

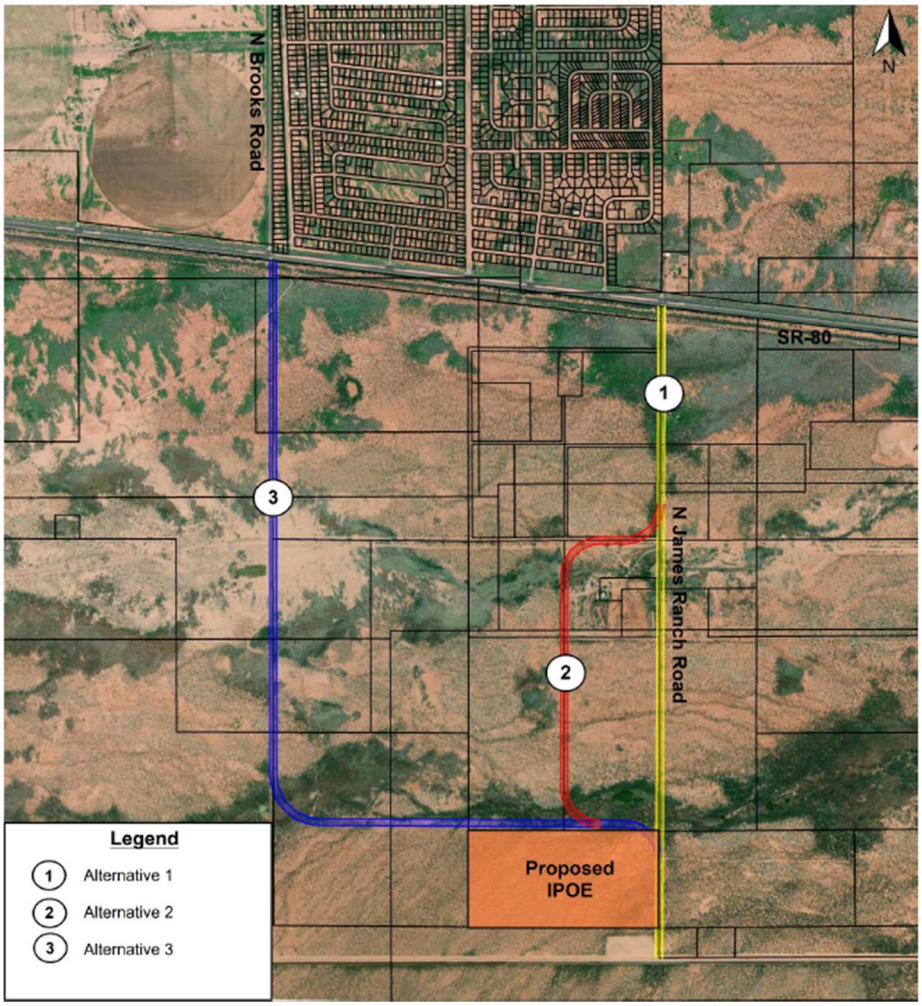


Figure 2. Connector Road Alignment Alternatives Map

The existing IPOE accommodates both commercial and passenger traffic. Trucks entering or exiting the existing IPOE must travel through the City of Douglas on US 191. The current route has 10 schools, 1 healthcare facility, and 7 parks, as well as numerous playgrounds and civic uses within a one-mile radius.

Figure 3 shows the route between the current commercial IPOE and the ADOT Commercial Weigh Station.

The proposed Douglas Commercial IPOE Connector Road falls entirely outside the Douglas municipal limits. One school and one healthcare facility fall within a one-mile radius of the proposed facility. As a result of the relocated Commercial IPOE and the proposed connector road, there will not be any commercial traffic going through the IPOE within the City of Douglas, with all commercial traffic redirected to a rural area. The routing of commercial traffic onto this proposed connector road will result in a reduction in congestion on US 191 through the City of Douglas.

Figure 4 shows the route between the proposed connector road and the ADOT Commercial Weigh Station.

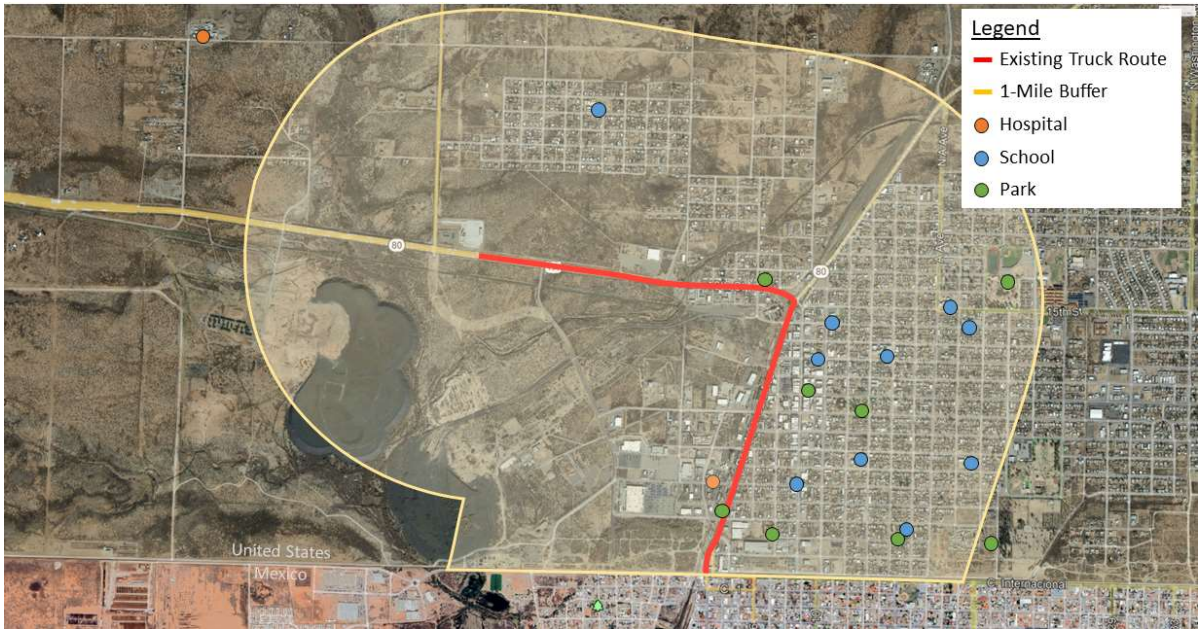


Figure 3. Existing Truck Traffic Route

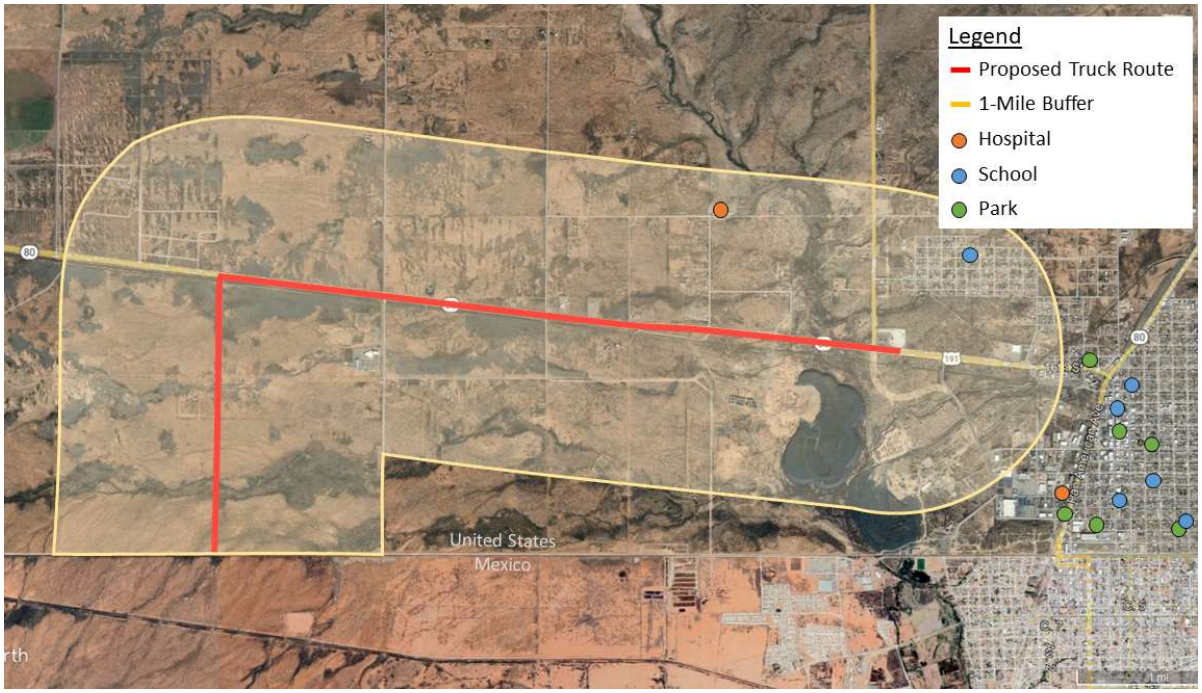


Figure 4. Proposed Truck Traffic Route

The Paul Spur/Douglas planning area is currently in nonattainment for large particulates, otherwise known as PM10. This area was designated as a moderate nonattainment area on Oct. 31, 1990 (55 FR 45799). The Paul Spur/Douglas PM10 nonattainment area is located along the Mexico-United States boarder in Cochise County. The Arizona Department of Environmental Quality (ADEQ) maintains two active air quality monitoring stations in the Paul Spur/Douglas PM10 nonattainment area:

- AQS Site ID 04-003-0011 – Paul Spur Chemical Lime Plant
- AQS Site ID 04-003-1005 – Douglas Red Cross

The Paul Spur/Douglas PM10 nonattainment area and the locations of the two PM10 monitoring stations are shown in **Figure 5**. **Table 1** shows the 24-hour PM10 monitoring data for the last three full years for 2020 through 2022 and 2023 through September 30, 2023.

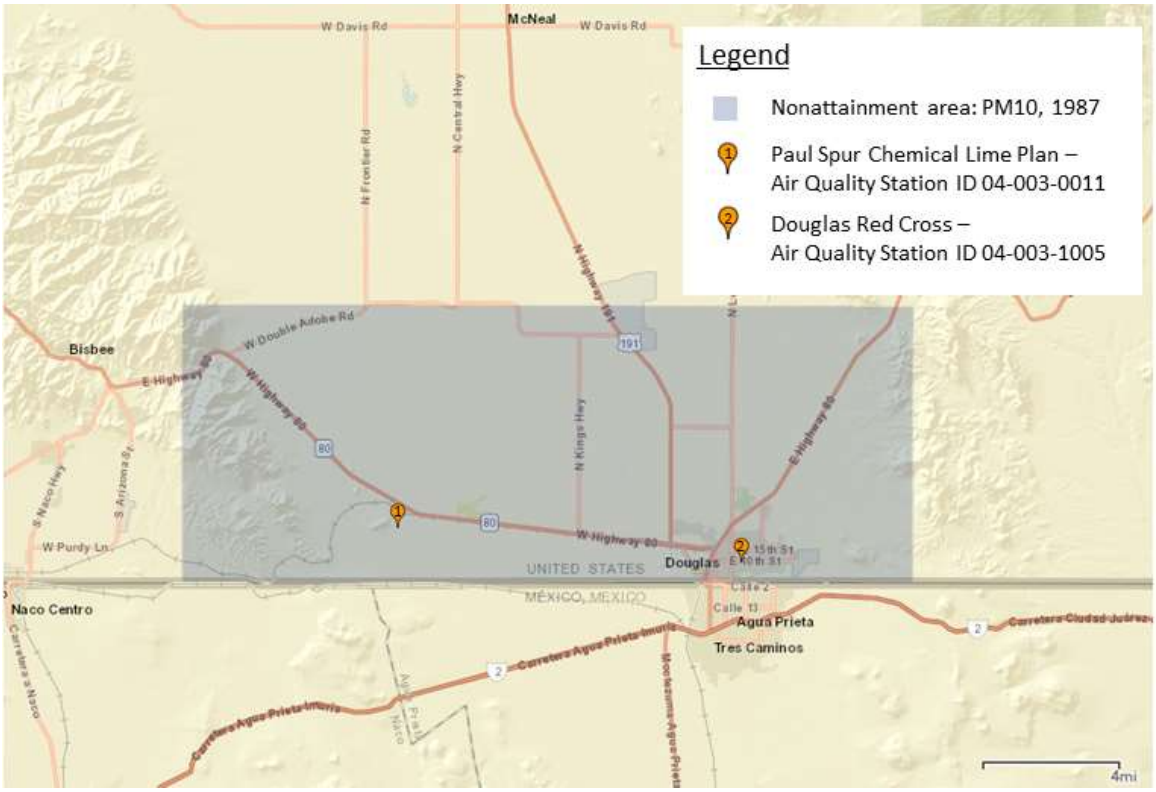


Figure 5. PM10 Monitoring Station Locations

Table 1: Paul Spur/Douglas PM10 Monitoring Data (2020-2023)

Year	PM10 Annual Mean Concentration (ug/m^3)		PM10 Maximum Concentration (ug/m^3)		Number of Days Exceeding NAAQS	
	Paul Spur	Douglas	Paul Spur	Douglas	Paul Spur	Douglas
2020	22.4	28.7	154	129	1	0
2021	21.3	31.9	161	107	1	0
2022	18.8	26.2	91	130	0	0
2023[1]	19.0	27.7	99	155	0	1

1 – Partial year data through September 30, 2023
Source: https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors

Annual and maximum PM10 concentrations for the Paul Spur Chemical Lime Plant monitoring station (ID 04-003-0011) have generally decreased over the past four years. The average PM10 concentration for the Douglas Red Cross monitoring station (ID 04-003-1005) has been steady over time, ranging between 26.3 and 31.9 ug/m^3. The maximum concentration for this monitoring station was steady for 2020 through 2022 but had one day of exceedance of the NAAQS for PM10 in 2023.

As an isolated rural nonattainment area, the Paul Spur/Douglas planning area is subject to a regional air quality conformity process. The planned Douglas Commercial Port of Entry Connector Road is likely to be classified as regionally significant and is not within a conforming Transportation Improvement Program (TIP). The area also does not have motor vehicle emissions budgets (MVEBs) established within the State Implementation Plan (SIP). An interagency consultation group was established to help guide the development of the air quality analysis, consisting of members from:

- Arizona Department of Transportation (ADOT)
- Arizona Department of Environmental Quality (ADEQ)
- Federal Highway Administration (FHWA)
- Environmental Protection Agency (EPA)
- General Services Administration (GSA)
- Customs and Border Protection (CBP)

Project Assessment

There are six project types for which ADOT requires a quantitative hot-spot analysis of local particulate emissions in nonattainment or maintenance areas. The following compares the proposed Douglas Commercial Port of Entry Connector Road project to these six project types to determine if a hot-spot analysis is required. If the proposed project is not considered a project of local air quality concern and a hot-spot analysis is not required for the proposed project, a qualitative analysis will be completed instead.

New Highway Capacity

Is this a new highway project that has a significant number of diesel vehicles?

The proposed project includes a new roadway that connects the proposed Douglas Commercial IPOE to SR 80 at the existing intersection with James Ranch Road. In the summary tables and traffic study, the new roadway is referred to as James Ranch Road. Based on the traffic study completed for the

proposed project, the average annual daily traffic (AADT) on the new roadway is projected to be 6,300 in 2028 and 19,200 in 2050. The projected truck percentages for 2028 and 2050 are 30% and 24%, respectively. The truck percentages and corresponding AADT volumes are provided in **Table 2** through **Table 5**. This proposed commercial IPOE will relocate trucks from the existing Douglas Port of Entry within the Douglas city limits to the proposed location outside the city. In both 2028 and 2050, the introduction of this project results in no more than a 10% increase in truck volumes to the existing network. As a result of the relocation of commercial trips to the new Commercial IPOE, this project will move truck traffic from relatively high-density populated areas within the Douglas city limits to a rural location west of the city.

Table 2: Existing and 2028 Truck Percentages for SR 80/James Ranch Road

Location	Existing				No-Build (2028)				Build (2028)				Difference (2028 Build - No-Build)			
		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %
James Ranch Road south of SR 80		0%	0%	0%		2%	0%	2%		30%	5%	25%		28%	5%	23%
James Ranch Road north of SR 80		0%	0%	0%		2%	0%	2%		2%	0%	2%		0%	0%	0%
SR 80 west of James Ranch Road		11%	6%	5%		11%	6%	5%		18%	6%	12%		7%	0%	7%
SR 80 east of James Ranch Road		11%	6%	5%		11%	6%	5%		21%	5%	15%		10%	-1%	10%

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Table 3: Existing and 2028 AADT for SR 80/James Ranch Road

Location	Existing				No-Build (2028)				Build (2028)				Difference (2028 Build - No-Build)			
	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles
James Ranch Road south of SR 80	0	0	0	0	300	6	0	6	6,300	1,883	322	1,561	6,000	1,877	322	1,555
James Ranch Road north of SR 80	0	0	0	0	300	6	0	6	300	6	0	6	0	0	0	0
SR 80 west of James Ranch Road	5,667	623	340	283	6,700	705	381	324	8,000	1,407	441	966	1,300	702	60	642
SR 80 east of James Ranch Road	5,667	623	340	283	6,700	715	387	328	13,200	2,713	725	1,988	6,500	1,998	338	1,660

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Table 4: 2050 Truck Percentages for SR 80/James Ranch Road

Location	No-Build (2050)				Build (2050)				Difference (2050 Build - No-Build)			
		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %
James Ranch Road south of SR 80		2%	0%	2%		24%	6%	19%		22%	6%	17%
James Ranch Road north of SR 80		2%	0%	2%		2%	0%	2%		0%	0%	0%
SR 80 west of James Ranch Road		10%	6%	5%		17%	6%	11%		7%	0%	6%
SR 80 east of James Ranch Road		11%	6%	5%		20%	6%	14%		9%	0%	9%

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Table 5: 2050 AADT for SR 80/James Ranch Road

Location	No-Build (2050)				Build (2050)				Difference (2050 Build - No-Build)			
	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles
James Ranch Road south of SR 80	700	14	0	14	19,200	4,629	1,075	3,554	18,500	4,615	1,075	3,540
James Ranch Road north of SR 80	700	14	0	14	700	14	0	14	0	0	0	0
SR 80 west of James Ranch Road	10,500	1,091	587	504	14,100	2,381	790	1,591	3,600	1,290	203	1,087
SR 80 east of James Ranch Road	10,500	1,110	600	510	30,500	5,989	1,730	4,259	20,000	4,879	1,130	3,749

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Expanded Highway Capacity

Is this an expanded highway project that has a significant increase in the number of diesel vehicles?

It is expected that all commercial vehicles entering the United States will be required to go through the ADOT Commercial Inspection Facility. This facility is currently located on the northeast corner of the intersection of SR 80 and US 191, which is east of the connector road. Therefore, this project is expected to increase the AADT and truck percentage on SR 80 between the proposed connector road and US 191. The AADT on SR 80 is projected to increase from 6,400 to 12,600 in 2028 and from 10,000 to 29,500 in 2050 from No-Build to Build. The Existing and No-Build truck percentage on

SR 80 is 11%. In the Build scenarios, the truck percentages are project to increase to 23% in 2028 and 21% in 2050. The truck percentages and corresponding AADT volumes are provided in **Table 6** through **Table 9**. SR 80 has sufficient capacity for the No-Build and Build scenarios and no improvements are recommended to expand the capacity as part of this project. The increase in truck volumes on SR 80 between the connector road and the ADOT Commercial Inspection Facility will correspond to fewer truck volumes at the existing port and within the Douglas city limits.

Table 6: Existing and 2028 Truck Percentages for SR 80/US 191

Location	Existing				No-Build (2028)				Build (2028)				Difference (2028 Build - No-Build)			
		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %
Chino Road south of SR 80		0%	0%	0%		0%	0%	0%		5%	0%	5%		5%	0%	5%
US 191 north of SR 80		11%	7%	4%		11%	7%	4%		27%	6%	21%		16%	-1%	17%
SR 80 west of US 191		11%	7%	4%		11%	7%	4%		23%	6%	17%		12%	-1%	13%
SR 80 east of US 191		11%	7%	4%		11%	7%	4%		15%	8%	7%		4%	1%	3%

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Table 7: Existing and 2028 AADT for SR 80/US 191

Location	Existing				No-Build (2028)				Build (2028)				Difference (2028 Build - No-Build)			
	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles
Chino Road south of SR 80	0	0	0	0	0	0	0	0	3,500	167	0	167	3,500	167	0	167
US 191 north of SR 80	3,681	405	221	184	5,000	550	350	200	6,900	1,841	395	1,446	1,900	1,291	45	1,246
SR 80 west of US 191	5,667	623	340	283	6,400	704	448	256	12,600	2,849	750	2,099	6,200	2,145	302	1,843
SR 80 east of US 191	8,941	984	805	179	9,400	1034	658	376	11,900	1,829	962	867	2,500	795	304	491

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Table 8: 2050 Truck Percentages for SR 80/US 191

Location	No-Build (2050)				Build (2050)				Difference (2050 Build - No-Build)			
		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %		Total Truck %	Medium Vehicle %	Heavy Vehicle %
Chino Road south of SR 80		0%	0%	0%		5%	0%	5%		5%	0%	5%
US 191 north of SR 80		11%	7%	4%		24%	6%	18%		13%	-1%	14%
SR 80 west of US 191		11%	7%	4%		21%	6%	15%		10%	-1%	11%
SR 80 east of US 191		11%	7%	4%		17%	8%	9%		6%	1%	5%

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Table 9: 2050 AADT for SR 80/US 191

Location	No-Build (2050)				Build (2050)				Difference (2050 Build - No-Build)			
	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles	AADT	Total Trucks	Medium Vehicles	Heavy Vehicles
Chino Road south of SR 80	0	0	0	0	5,400	257	0	257	5,400	257	0	257
US 191 north of SR 80	7,700	847	539	308	11,900	2,844	704	2,140	4,200	1,997	165	1,832
SR 80 west of US 191	10,000	1,100	700	400	29,500	6,185	1,777	4,408	19,500	5,085	1,077	4,008
SR 80 east of US 191	14,500	1,595	1,015	580	28,000	4,667	2,102	2,564	13,500	3,072	1,087	1,984

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Projects with Congested Intersections

Is this a project that affects a congested intersection (LOS D or greater) that has a significant number of diesel trucks, OR will change LOS to D or greater because of an increase in traffic volumes from a significant number of diesel trucks related to the project?

The existing intersection of SR 80 and James Ranch Road has two-way stop control (TWSC) for James Ranch Road. In the Existing and 2028 No-Build scenarios, the worst movement at this intersection operates at a level of service (LOS) B. After reviewing the results of the traffic analysis and considering other potential factors, ADOT determined that signalized traffic control is the preferred intersection alternative in the 2028 Build and 2050 Build scenarios. Diagrams showing the

signalized intersection geometry with 2050 Build AM and PM peak hour traffic volumes are shown in **Figure 6** and **Figure 7**, respectively. In all Build scenarios, the intersection is expected to operate at LOS C or better.

All intersections on James Ranch Road south of SR 80 associated with the proposed commercial IPOE are anticipated to operate as well as or better than the intersection of SR 80 and James Ranch Road due to the lower traffic volumes expected at these intersections.

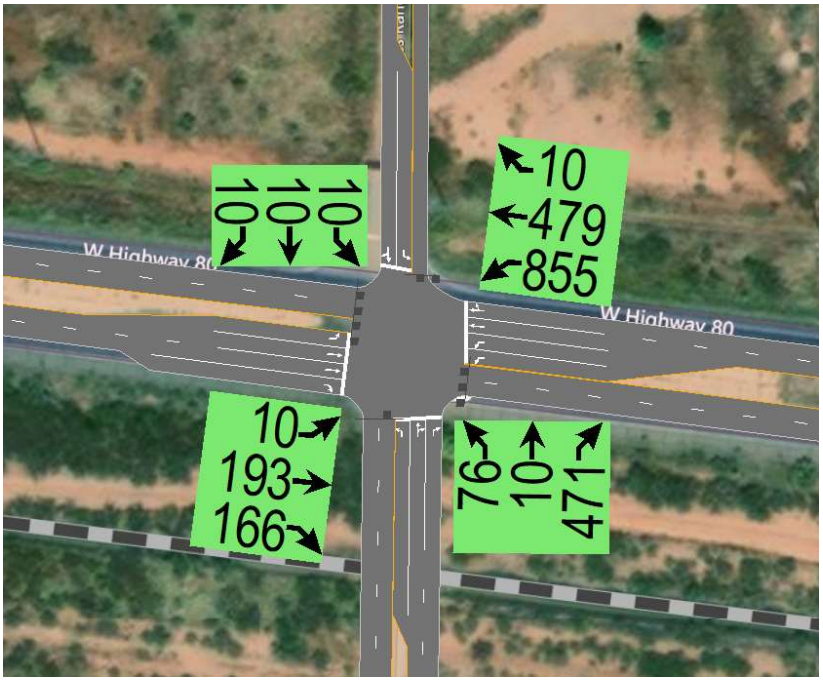


Figure 6. 2050 Build AM Signalized Intersection Alternative

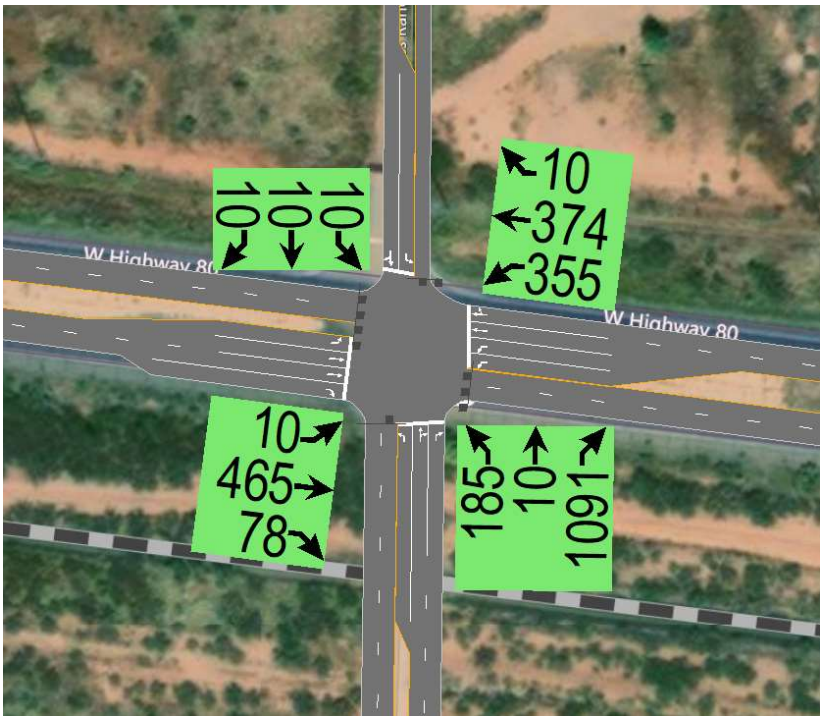


Figure 7. 2050 Build PM Signalized Intersection Alternative

The intersection of SR 80 and US 191/Chino Road is signalized and operates/is expected to operate at LOS A in all scenarios except the 2050 Build scenario, where it is expected to operate at LOS C.

The existing, 2028 No-Build, and 2028 Build LOS fall below (i.e., are less congested than) LOS defined as congested by the EPA. Intersection LOS by scenario is shown in **Table 10** and **Table 11**.

Table 10: SR 80 at James Ranch Road Intersection Level of Service by Scenario

Intersection	Existing (TWSC)*		No-Build TWSC (2028)*		No-Build TWSC (2050)*		Build Signalized (2028)		Build Signalized (2050)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS
SR 80 at James Ranch Road	B	B	B	B	C	C	A	B	C	C

* TWSC values represent worst movement LOS instead of overall intersection LOS

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

Table 11: SR 80 at US 191/Chino Road Intersection Level of Service by Scenario

Intersection	Existing		No-Build (2028)		No-Build (2050)		Build (2028)		Build (2050)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS
SR 80 at US 191/ Chino Road	A	A	A	A	A	A	A	A	C	C

Source: *City of Douglas International Port of Entry Connector Road Final Traffic Report*, prepared in June 2023 by Kimley-Horn, and associated traffic analysis.

New Bus and Rail Terminals

Does the project involve construction of a new bus or intermodal terminal that accommodates a significant number of diesel vehicles?

This project does not involve construction of a new bus or intermodal terminal.

Expanded Bus and Rail Terminals

Does the project involve an existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel buses (or trains) increases by 50% or more, as measured by arrivals?

This project does not involve an existing bus or intermodal terminal.

Projects Affecting PM Sites of Violation or Possible Violation

Does the project affect locations, areas or categories of sites that are identified in the PM10 or PM2.5 applicable plan or implementation plan submissions, as appropriate, as sites of violation or potential violation?

There is no established implementation plan for this area. Therefore, this project does not affect locations, areas, or categories of sites of violation or potential violation.

POAQC Determination

Based on the initial consultation with the Interagency Consultation Group, this project is considered a Project of Air Quality Concern (POAQC) due to the increase in diesel truck traffic to the area.

Attachment B: Additional MOVES and AERMOD Modeling Data

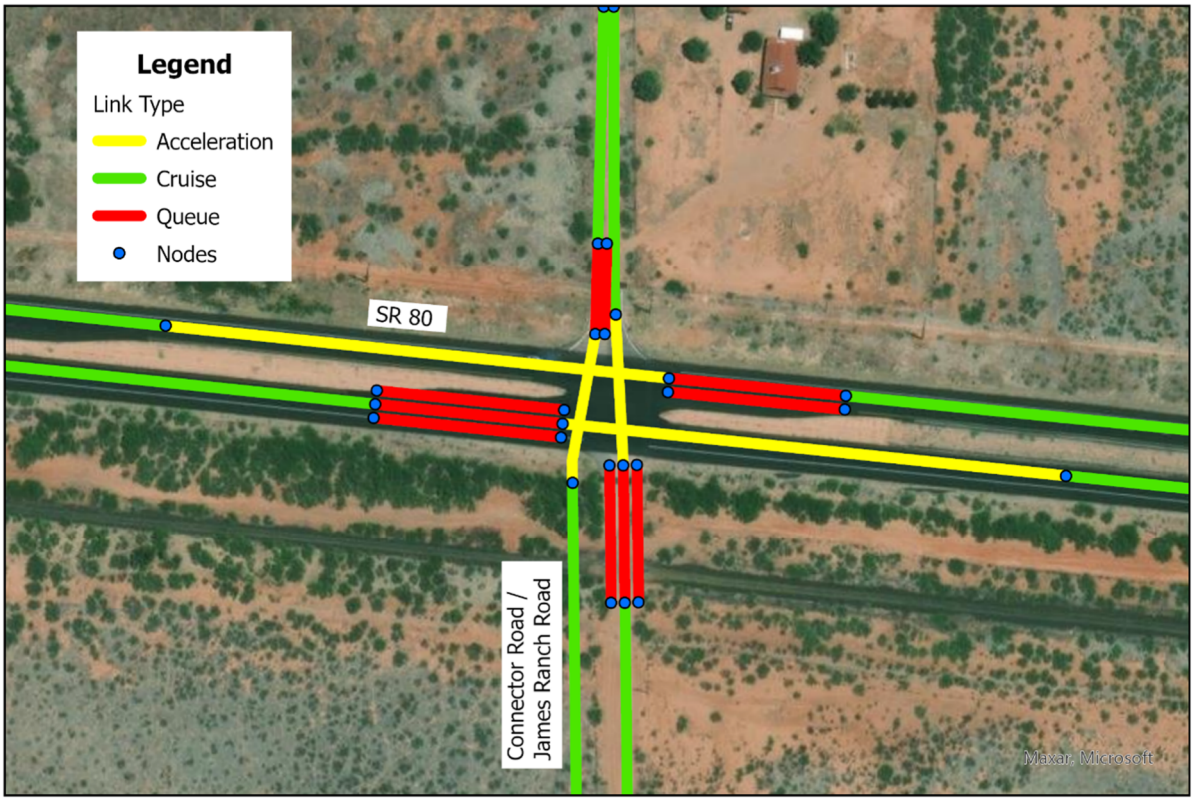
Modeling Extent

EPA's PM Hot-Spot Guidance Section 3.3.2 states that it may be appropriate to only analyze locations that would have the highest emissions concentrations. If conformity is met at these specific locations, then conformity throughout the project can be assumed. The location with the highest concentration of PM emissions for the project is likely the intersection of the Connector Road/James Ranch Road and SR 80. This location represented the area with the highest traffic volumes, lowest speeds, and most overall delay for the Connector Road. Attachment A of this document contains background information from the Traffic Study. Tables 3 and 5 display the existing and projected volumes at the intersection, while Tables 2 and 4 provide the existing and projected truck percentages. Table 10 shows the projected LOS for the intersection for each scenario. In addition, the proposed Port of Entry adjacent to the Connector Road has previously been studied under a general conformity analysis in the Environmental Impact Statement (EIS) for the Proposed Commercial Land Port of Entry (January 2023) developed by GSA.

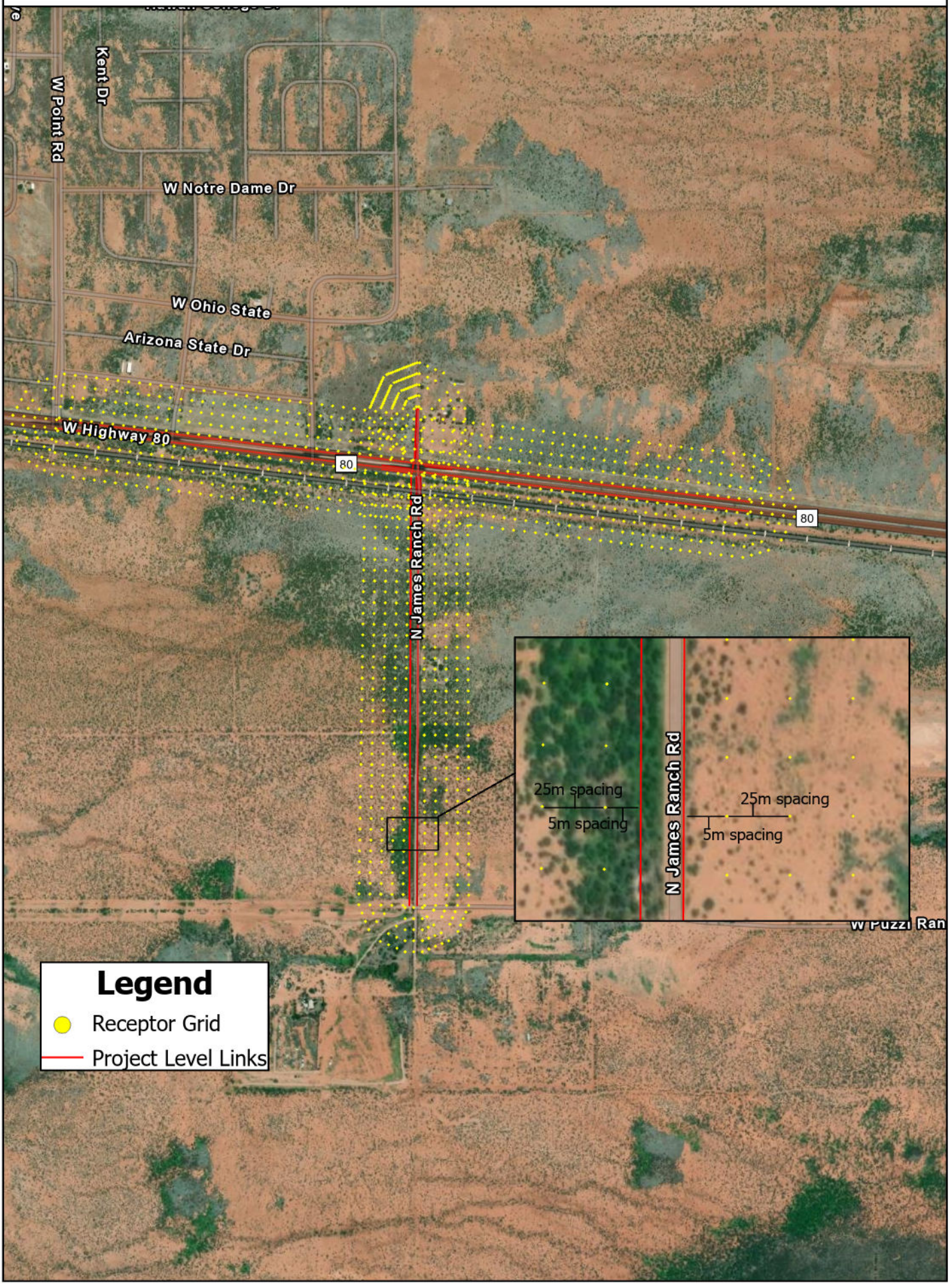
The following figures illustrate the proposed project-level links and receptors for this analysis, as well as the location and wind rose information for the Bisbee-Douglas International Airport Meteorological Station.

Project Links (Connector Road / James Ranch Road & SR 80)

Project Links Zoomed In View (Intersection of Connector Road / James Ranch Road & SR 80)

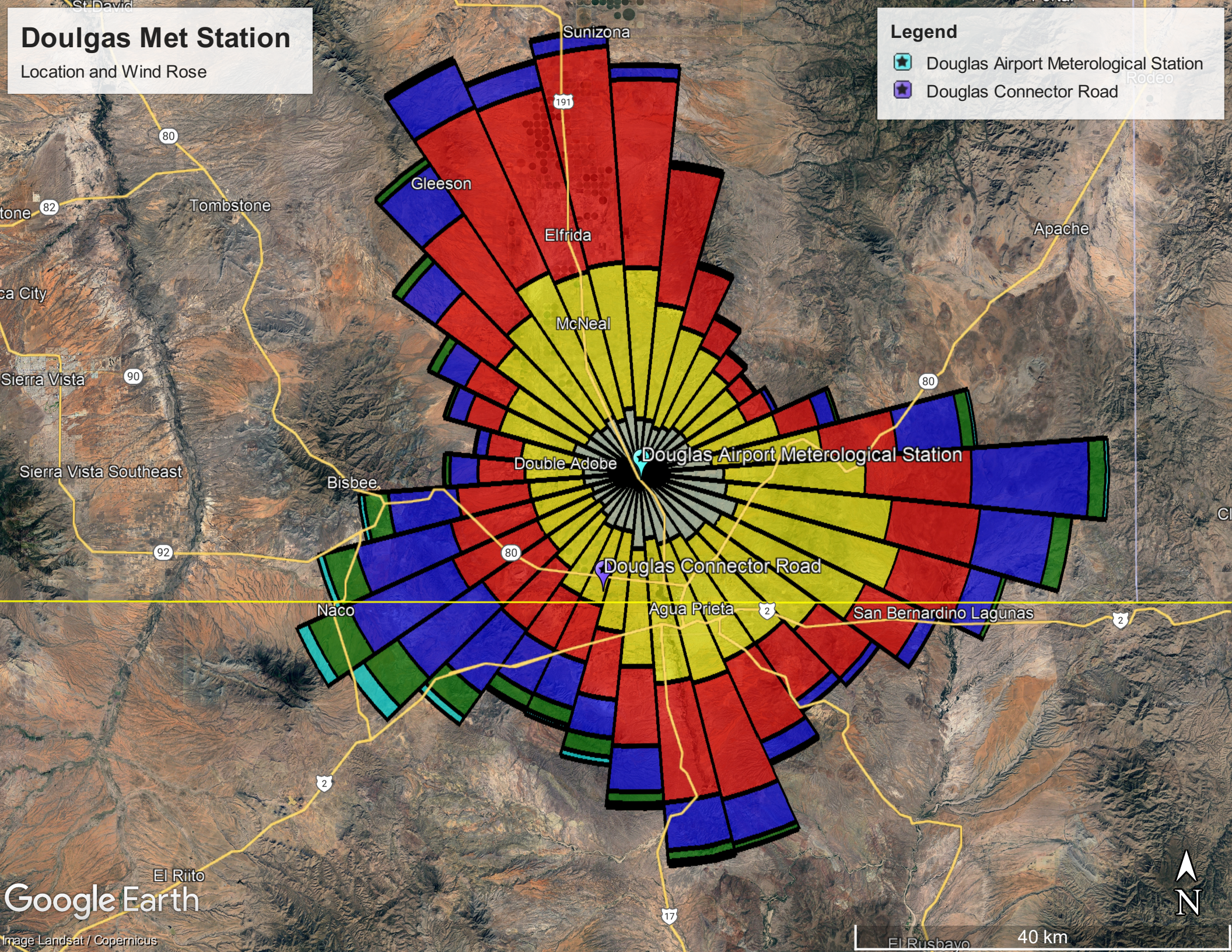


AERMOD Receptor Grid Map



Doulgas Met Station

Location and Wind Rose

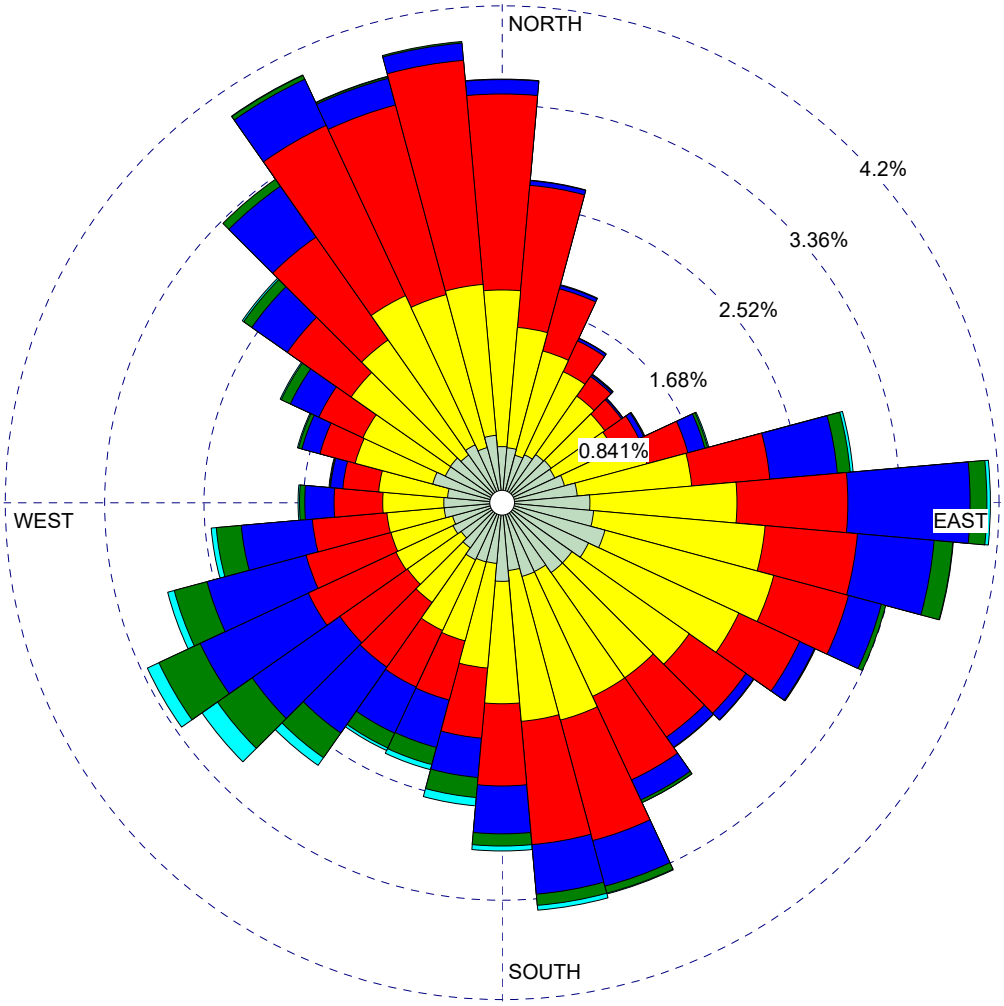


WIND ROSE PLOT:

Station #93026

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	Start Date: 1/1/2015 - 00:00 **End Date: 12/31/2019 - 23:59**	MODELER:	
	CALM WINDS: **1.63%**	TOTAL COUNT: **43127 hrs.**	
	AVG. WIND SPEED: **3.79 m/s**	DATE: **7/15/2024**	PROJECT NO.:

Attachment C: Agency Comments and Responses from Consultation

FHWA Comments on Initial Consultation Document (Received 6/21/2024)

- General comment – As FHWA mentioned on our recent call, it appears modeling is being done only for the intersection of Connector Road/James Ranch Road and SR 80. Please add discussion about why this is the likely area of highest concentration. Typically, you would need to model the entire project. So make sure you can justify the decision to limit the scope (which does seem to make sense – most delay/lowest speeds/highest volumes, etc. at that location).
    - Response: Justification will be added to the consultation document. EPA's PM Hot-Spot Guidance Section 3.3.2 states that it may be appropriate to only analyze locations that would have the highest emissions concentrations. If conformity is met at these specific locations, then conformity throughout the project can be assumed. The location with the highest concentration of PM emissions for the project is likely the intersection of the Connector Road/James Ranch Road and SR 80. This location represented the area with the highest traffic volumes, lowest speeds, and most overall delay for the Connector Road. Tables for traffic volumes, intersection level of service, and truck percentages for the intersection are found in Attachment A of the consultation document.

- Pg 3 – Can you clarify what is meant by "each of these 4 runs will be further split…" under time spans? Assuming you mean the appropriate hour within each of these periods is selected in the MOVES timespans panel.
    - Response: This is in the ADOT draft text Table (Table 1). The proposed inputs and assumptions for this analysis are in Table 2 starting on page 7. This text was referring to having 4 time period runs (6-9AM, 9AM-4PM, 4-7PM & 7PM-6AM) for each season (Jan, Apr, July, Oct). After our discussion, only 1 season will be analyzed. Preliminary model runs were completed for each season to determine the month with the highest emissions rates, which was July. So, there will now be a total of 4 runs, instead of the original 16. The consultation document will be updated to include this change.

- Pg 5 – Please use the latest version of AERMOD (23132)
    - Response: The latest version of AERMOD will be used.

- Pg 7 – Explain why 2050 was selected as the year with highest emissions (e.g., road dust dominant – highest VMT will result in maximum emissions in 2050)
    - Response: Justification will be added to the consultation document. 2050 was selected as the analysis year because this will be the peak year for emissions from the project. 2050 will contain the highest vehicle volumes for the project, and therefore, the highest levels of road dust which is the largest contributor to PM10 emissions.

- Pg 9 – Use flagpole receptor heights of 1.8 m (or make sure they're set at 1.8 meter under RE pathway)
    - Response: Flagpole receptor heights of 1.8 m will be used.

- Pg 9 – Confirm with ADEQ that Nogales met data is appropriate for the project area (based on their permitting website, it appears this is indeed the closest surface met monitor to Douglas).
    - Response: After discussing with ADEQ, met data from the Bisbee-Douglas Airport was found to be available. ADEQ had not previously processed this data or made it available on their website. ADEQ was able to process it and provide it for our use. There were issues with missing data for recent years so the years 2015-2019 were selected for use.

- Pg 9 – Why is the PROFFILE data set labeled as "Nogales2017-2021" when it seems to be coming from the Tucson airport?
    - Response: This will be changed to reference the Douglas dataset.

- Pg 10 – Our understanding is that the project area is quite rural and does not experience urban heat island met effects. Is there a reason why the URBAN option is being selected?
    - Response: This will be switched to RURAL.

- Pg 10 – Please add some discussion about why the Paul Spur Chemical Lime Plan monitor was selected. Is it the closest? Similar land-use/source mix? Up-wind?
    - Response: Based on recommendation from ADOT and previous precedent in Arizona, we will interpolate between the 2 monitors. They are roughly the same distance away from the project site and there are certain monitoring values that are slightly higher at each of the monitors. Therefore, interpolating between the 2 sites will be the most conservative approach. Receptor interpolation is already an accepted approach in Arizona and has bene developed or used by ADOT.